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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,587	08/30/2001	Bernd Pentz	212981US0XDIV	8213

22850 7590 09/03/2003

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ALEXANDRIA, VA 22314

EXAMINER
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FORTUNA, ANA M

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N . 09/941,587	Applicant(s) PENTH ET AL.	
	Examiner Ana M Fortuna	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 66-105 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 66-105 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 5) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 66-105 are rejected under the judicially created doctrine of double patenting over claims 1-62 of U. S. Patent No. 6,309,545 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: the limitations of the claims in the patent overlap the limitations of the claims in the present invention. The claims in the present application are combinations of the independent and dependent claims in the patent. Claim 66 corresponds to claims 1, 10, 19, and 62 of the patent ('545). Claims 67-68 correspond to claims 2, 3, 32; claims 69-72 correspond to claims 12, 13, 14, and 72 respectively; claims 73-79 correspond to claims 20, 23, 24, 30, 31, 41; claims 80-86 correspond to limitations of claims 18, 44-51 of the patent, and claims 87-105 correspond with the

limitations of claims 51, 50, 43, 1, 54, 55, 56, 62, 40, 31, 32 and 35-39 of the patent respectively.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

3. Claims 66-105 are rejected under the judicially created doctrine of double patenting over claims 1-76 of U. S. Patent No. 6, 299, 778 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: the claims in the patent overlap the limitations of the claims in the present invention. Claims 66, 79, 89, and 103-15 correspond to the limitations of claims 1, 10, 15, 36, 39, 19, and 76 in the patent ('778). Claims 67-68 correspond with claim s 36-37, 2, 3 and 7 respectively. Claims 70-77 correspond with claims 12-13, 14, 19-21, 24-26 and 35; claims 80-88, and 93 of the present invention correspond to claims 5, 40-455; claims 94-102 correspond to claims 58, 36, 68, 71-75 of the patent respectively.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 66-86-95, 97-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al (5,376,442)(hereinafter '442). '442 discloses the composite filtering material and the process of making the composite and uses as claimed in the above claims (abstract). The composite of reference '442 includes a carrier or support and a film of inorganic sintered non-metallic particles on the support and bridging the interstices thereof, the composite is further heated (column 1, lines 1-30, column 3, lines 31-50, column 8, lines 41-53). The inorganic compounds for the composite are compounds included in the group of elements from groups III to VII, e.g. titania, zirconia, etc. (column 2, lines 44-53) which inherently possesses catalytic properties. Regarding claims 100-102, 104-105, 67-68, the membrane for separation of solid particles from liquid, by ultrafiltration, microfiltration, etc. (column 1, lines 42-68, column 2, lines 22-37). Regarding claims 66, 69-70, 80, reference '442 discloses the support material and gaps or pores size, and support materials including flexible materials (column 1, lines 31-65, column 1, lines 42-68, column 2, second paragraph, column 4, lines 24-27, and column 6, lines 4-28), the treatment of the support as claimed in claim 87-88 is also disclosed, e.g. chemical treatment with sodium dichromate and sulfuric acid (column 8, lines 41-53). The above reference fails to teach or express the ratio of particle size to the mesh opening of the support as being within the range claimed, however, from the range of particle size suggested to the range of support meshes or opening suggested in the patent ('442), e.g. particles size between 0.05 to 50 microns, and support having 200 micron, (column 2, lines 65-68, column 3, lines 1-5, column 5, lines 31-39). It would have been obvious to one skilled in the art at the time the invention was made to tailor the membrane with a specific ratio of particle size to mesh openings by selecting particles and support within the ranges disclosed in '442. The membrane thickness is also not disclosed as being in the claimed range as in claim 66, it would have been obvious to one skilled in the art at the time the invention was made to reach to the claimed thickness from the suggestion of "films of at least 0.2 micron" and about the same or less than double of the support thickness (column 3, lines 51-68, though column 4, lines 1-6).

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Regarding claim 71, expanded metal mesh is suggested for the support (column 2, lines 4-10). Regarding claims 66, 72, 73, 74, 78, 85, 90, 91, 92, titanium oxide, ceria, zirconia and mixtures thereof is disclosed, and the larger particles having a particle size in the range of 0.05 to 50 microns, particularly 1 to 10 microns is suggested (column 2, lines 44-68, column 3, lines 1-11). The combination of elements claimed in this claim is disclosed in the '442 reference, e.g. titanium or zirconium oxide, which includes oxygen (O). Mixing particles having smaller particles having a size between 4 nm to 1 micron, and smaller than 0.1 times the size of the larger particles, the fraction of the smaller to larger particles within the claimed range is also disclosed (column 2, lines 65-68, column 3, lines 1-10); the suspension containing water and alcohol is disclosed (column 3, lines 25-50).

As to claim 68, selecting particles to produce a predetermined pore size is disclosed in the above reference (column 2, lines 38-43). It would have been obvious to one skilled in the art at the time the invention was made to select large particle size in order to produce a pore size that is 10 % of the diameter of the particle, as suggested in the reference (442). The process of making the composite by coating the support by pressing the suspension etc. as claimed in claim 79, and the temperature operating conditions are also disclosed (column 4, last paragraph bridging with column 5, lines 1-2, and lines 34-44). As to claim 95, subjecting the composite at temperatures between 50 to 10 degree C is not disclosed, however, it should be expected from a cooling process in which the composite is subjected to higher temperatures, e.g. the temperatures claimed in claim 94, which are disclosed in '442.

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5 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Ana M Fortuna  
Primary Examiner  
Art Unit 1723

AMF